

REMARKS

Claims 1-12 are pending in this application. By this Amendment, Claims 1-6 and 8-10 are amended. Support for the amendments is found, for example, at page 2, line 14 - page 3, line 11. No new matter is added. Reconsideration of the application is respectfully requested.

Claim 4 is rejected under 35 U.S.C. §112, second paragraph, because of alleged insufficient antecedent basis for "a second cooler." Claim 4 is amended to obviate this rejection.

Claims 1, 3, 7, 9 and 10 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,968,680 (Wolfe).

The basic difference of Wolfe's system from the present application is the atmosphere interface with the system. In Wolfe's systems, the exhaust gas is discharged to atmosphere from the turbine and the interface with atmosphere is at the turbine output or it can be said at the compressor input because the compressor takes air from the atmosphere.

In contrast, in the present application, the exhaust gas is discharged from the compressor, thus making the atmosphere interface at the compressor output. The novelty of this application over Wolfe exists in this atmosphere interface at compressor output, which enables the combustor and the fuel cell to operate at atmospheric pressure, obviating the need of an emergency protection device and resulting in simple construction.

Wolfe discloses that the pressurized air is supplied to the combustor 24, where it is mixed with fuel and ignited in col. 4, lines 38-40, and clearly indicates that combustor 24 is operated at above-atmospheric pressure.

Thus, Wolfe fails to disclose or suggest a combustor for burning a cell exhaust gas discharged from an atmospheric-pressure, high-temperature fuel cell, as recited in claims 1 and 9 of the present specification.

Wolfe discloses that the turbine 26 discharges the exhaust gas to atmosphere through recuperator 48 as shown in Fig. 1, and indicates that the turbine exhaust gas is at atmospheric pressure because the recuperator 48 is a heat exchanger (see col. 3, lines 23-24) and does not cause pressure difference between input and output.

Therefore, Wolfe fails to disclose or suggest a turbine in which a combustion gas discharged at the atmospheric pressure from the combustor expands and the pressure of the combustion gas drops to a negative pressure lower than the atmospheric pressure, the turbine discharging a turbine exhaust gas at the negative pressure, as recited in claims 1 and 9 of the present specification.

Wolfe discloses that ambient air entering the compressor 46 is pressurized and supplied to the recuperator 48 in col. 3, lines 17-19, and clearly indicates the compressor 46 compresses the air to above-atmospheric pressure at the exhaust output.

Thus, Wolfe fails to disclose or suggest a compressor for compressing the turbine exhaust gas discharged from the turbine to increase the pressure of the turbine exhaust gas to the atmospheric pressure and for discharging a compressor exhaust gas at the atmospheric pressure, as recited in claims 1 and 9 of the present specification.

Wolfe discloses that the recuperator 48 (heat exchanger), first and second heat exchanger 56 and 58 transfer the heat to the pressurized air to raise the temperature of pressurized air to the operating temperature of the SOFC 14, in col. 4, lines 21-23.

Thus, Wolfe fails to disclose or suggest a heat exchanger for transferring heat from the turbine temperature exhaust gas discharged from the turbine to the atmospheric pressure air to be supplied to the fuel cell, as recited in claims 1 and 9 of the present specification.

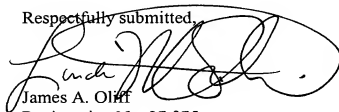
For at least the above reasons, claims 1 and 9 are patentable over Wolfe. Claims 2-8 depend from claim 1. Claims 10-12 depend from claim 9. Thus, claims 2-8 and 10-12 are

patentable over Wolfe for at least the same reasons as claim 1 and 9 respectively, as well as for the additional features they recite.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-12 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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